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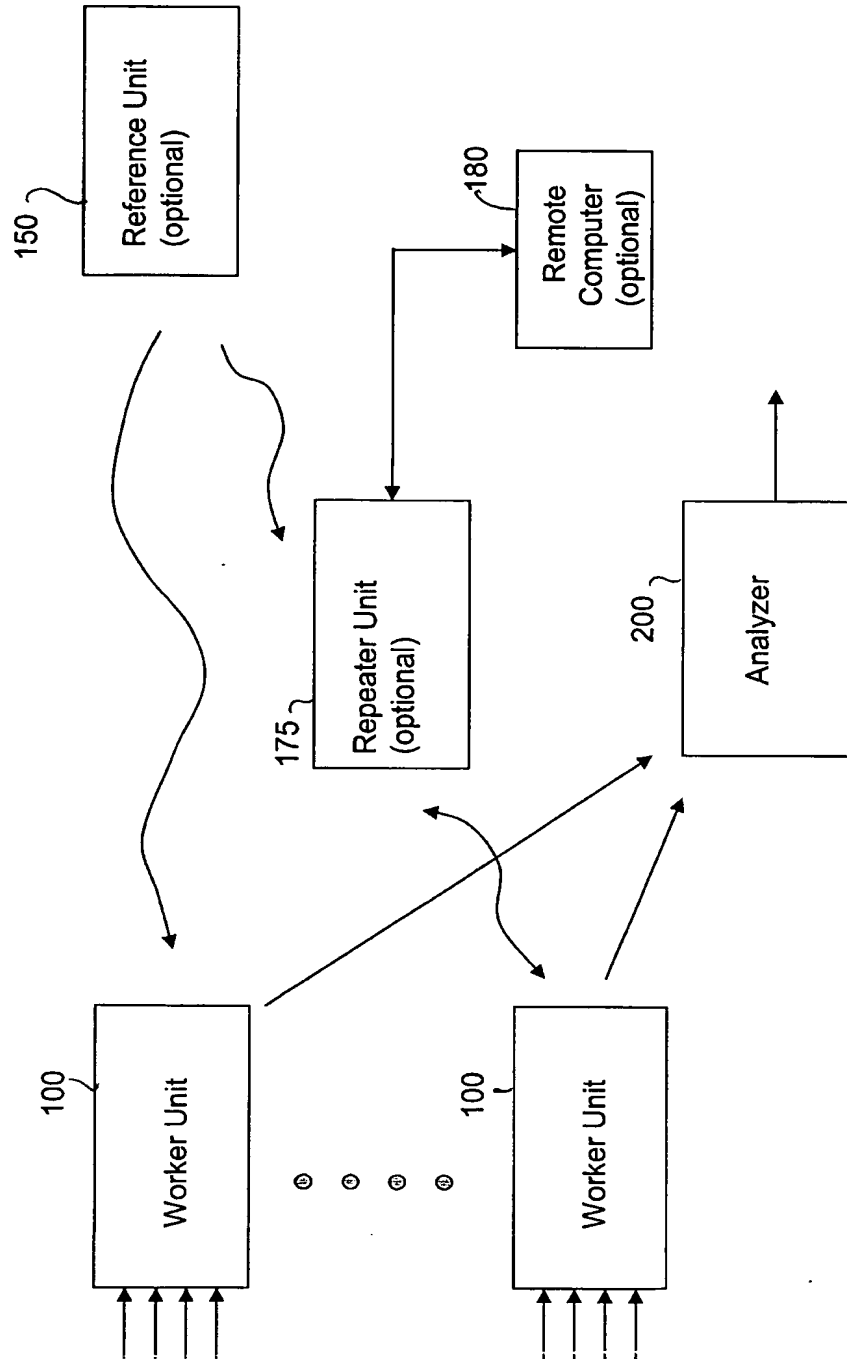
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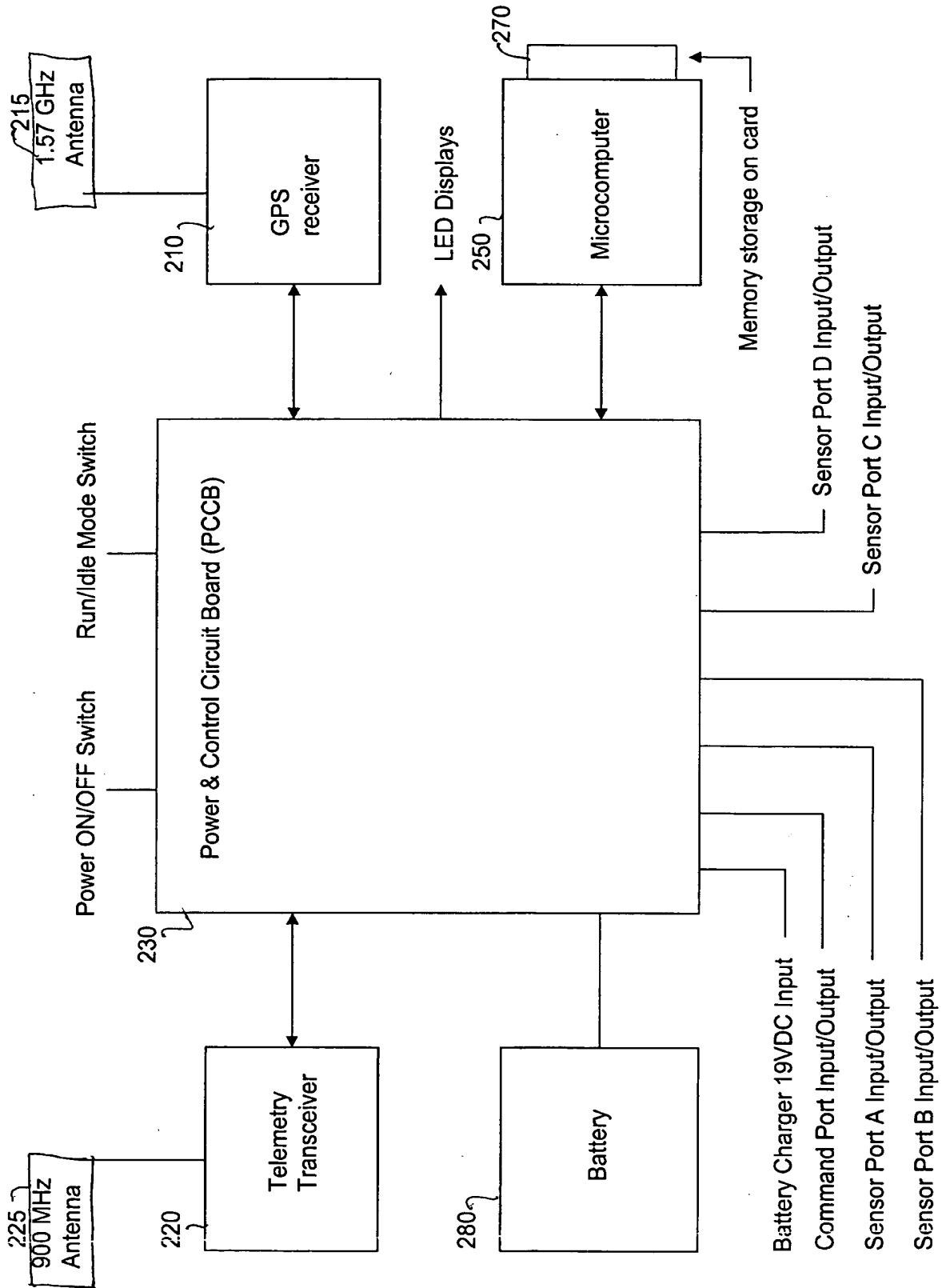


FIG. 2A

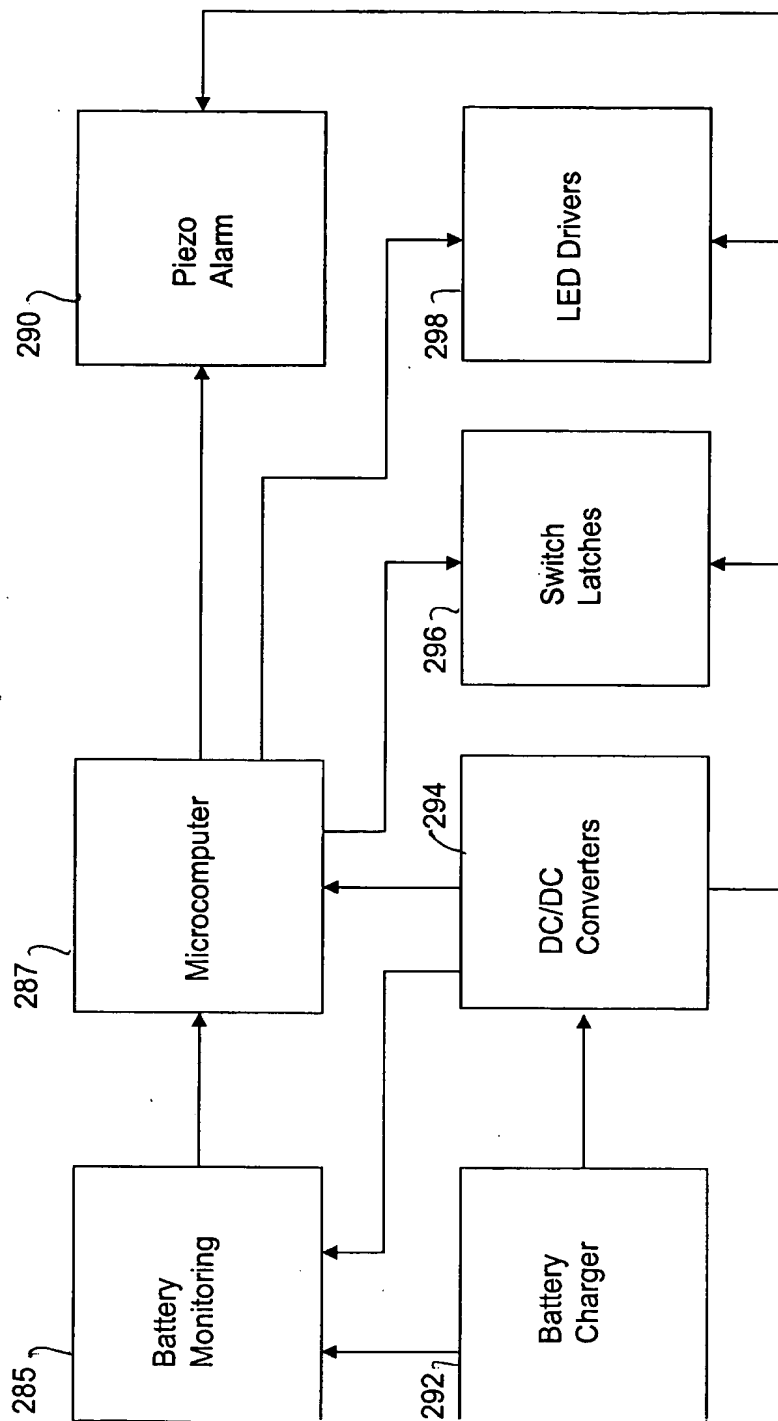
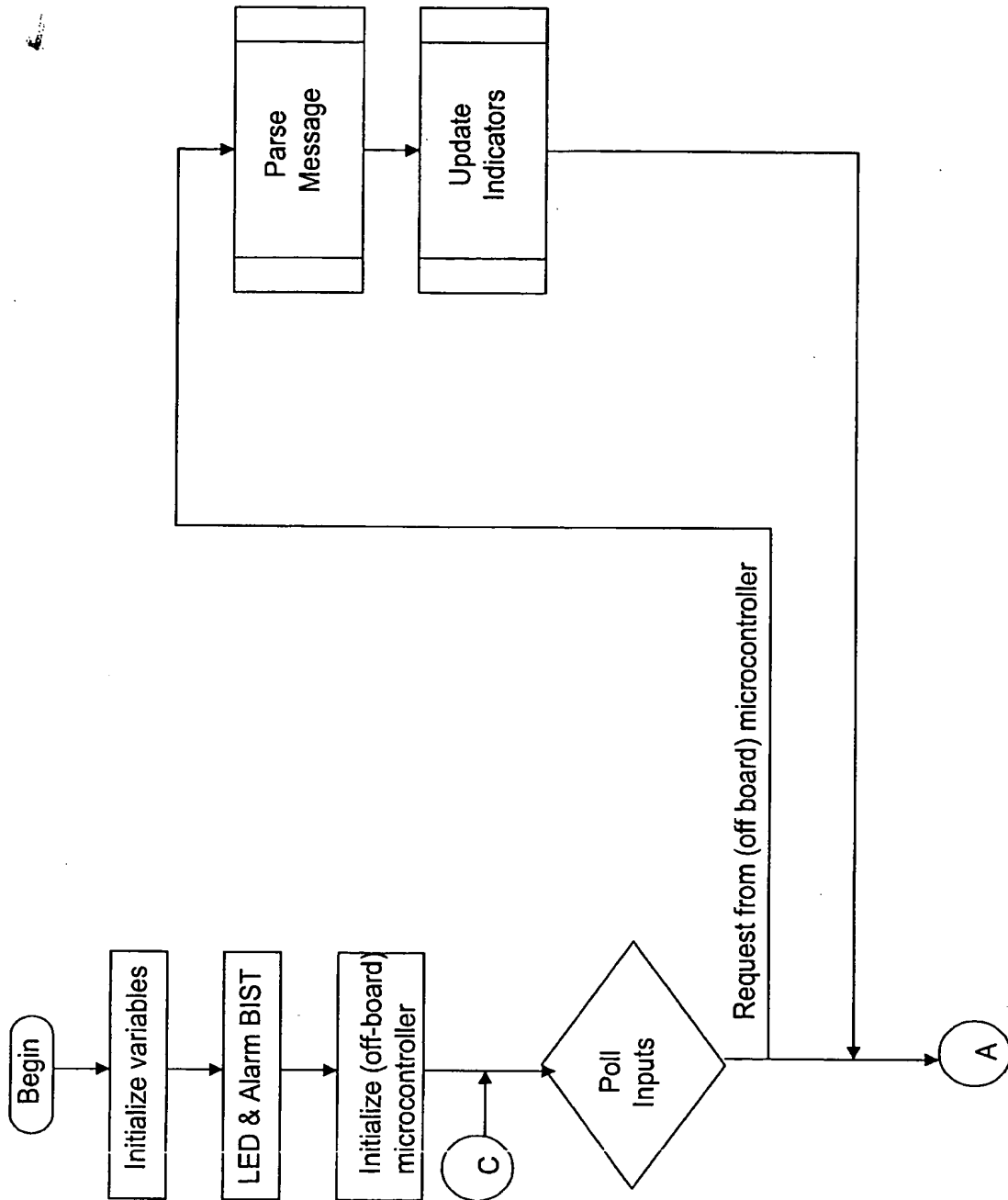


FIG. 2B



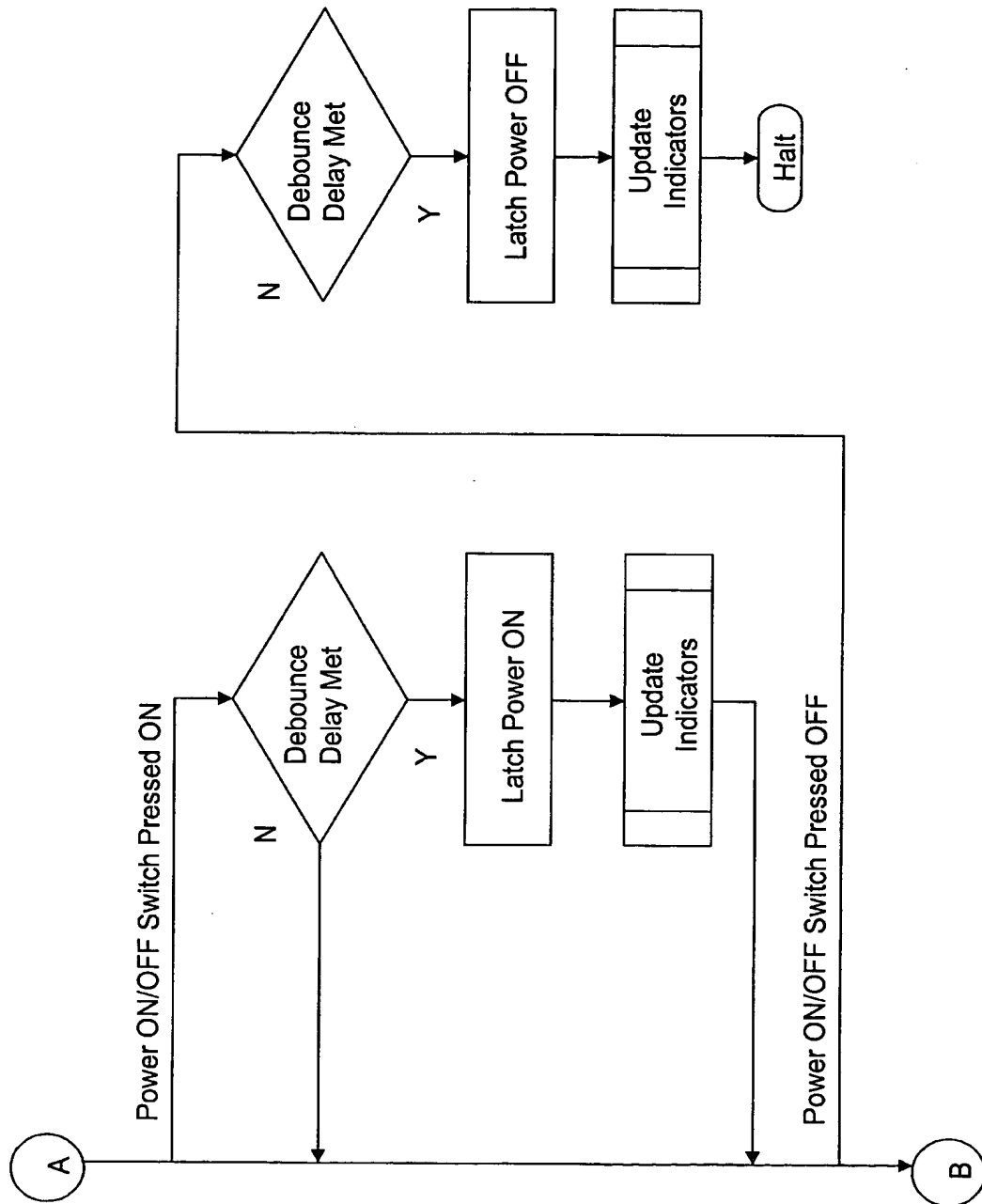
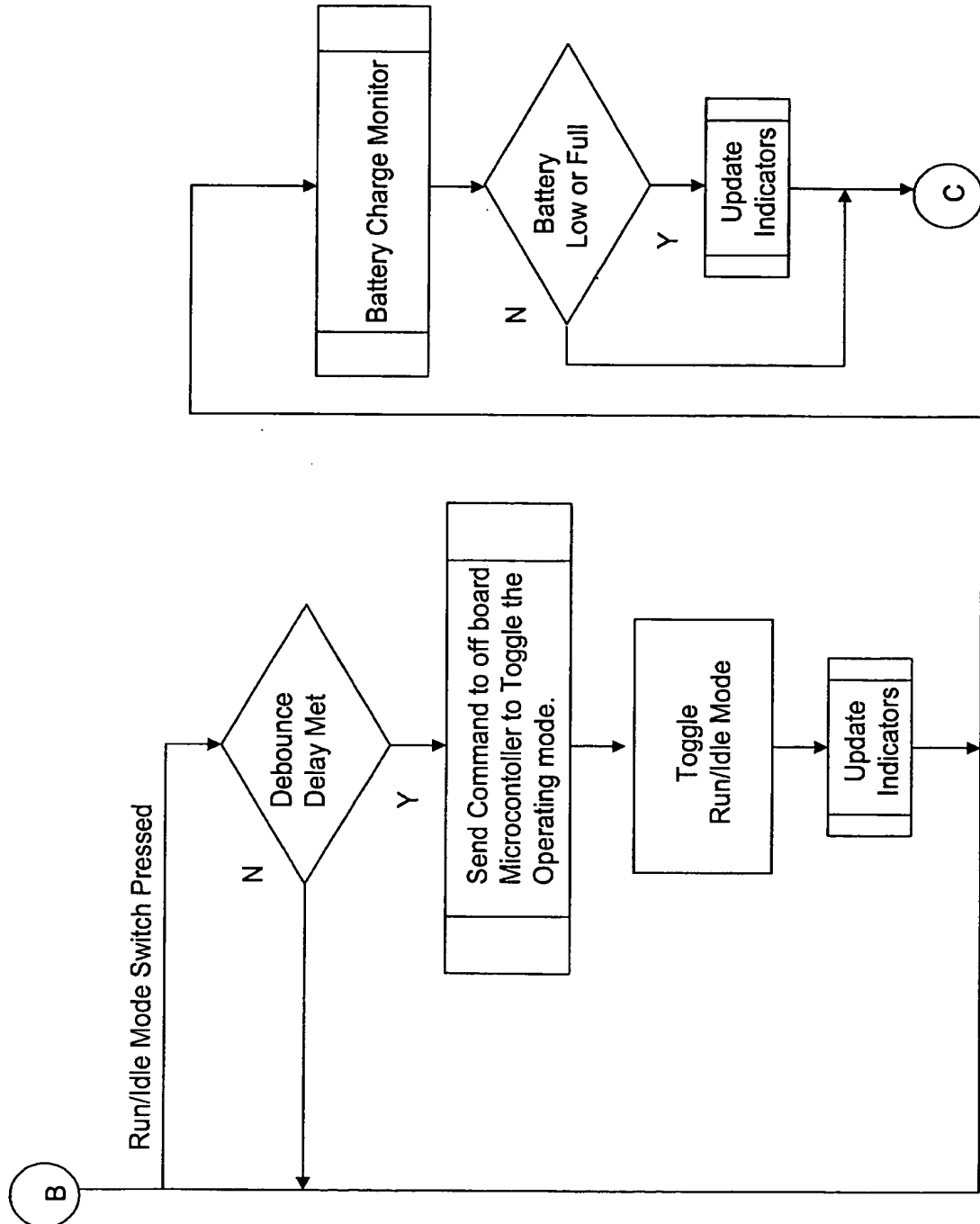


FIG. 3B



#16:3C

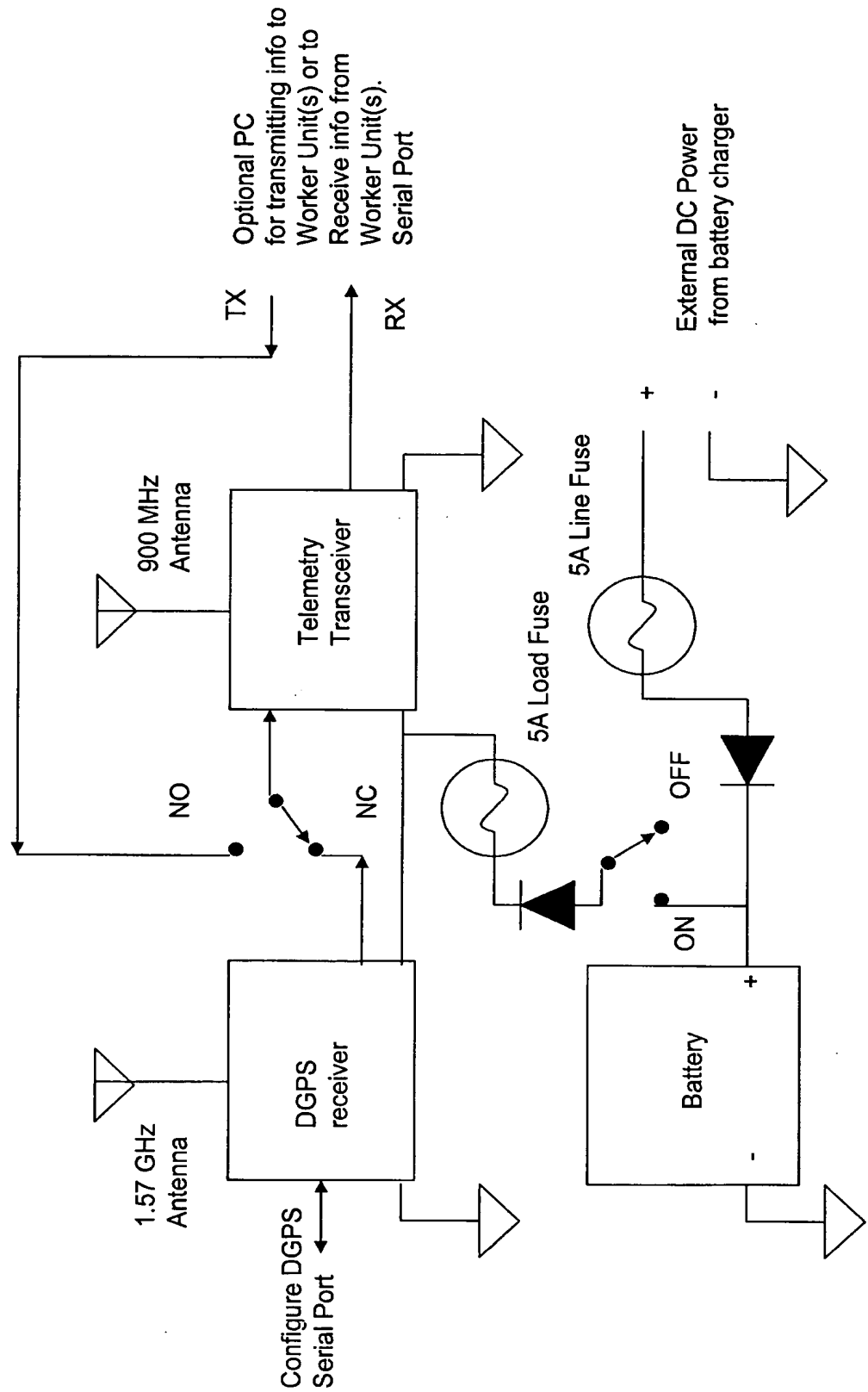


FIG. 4A

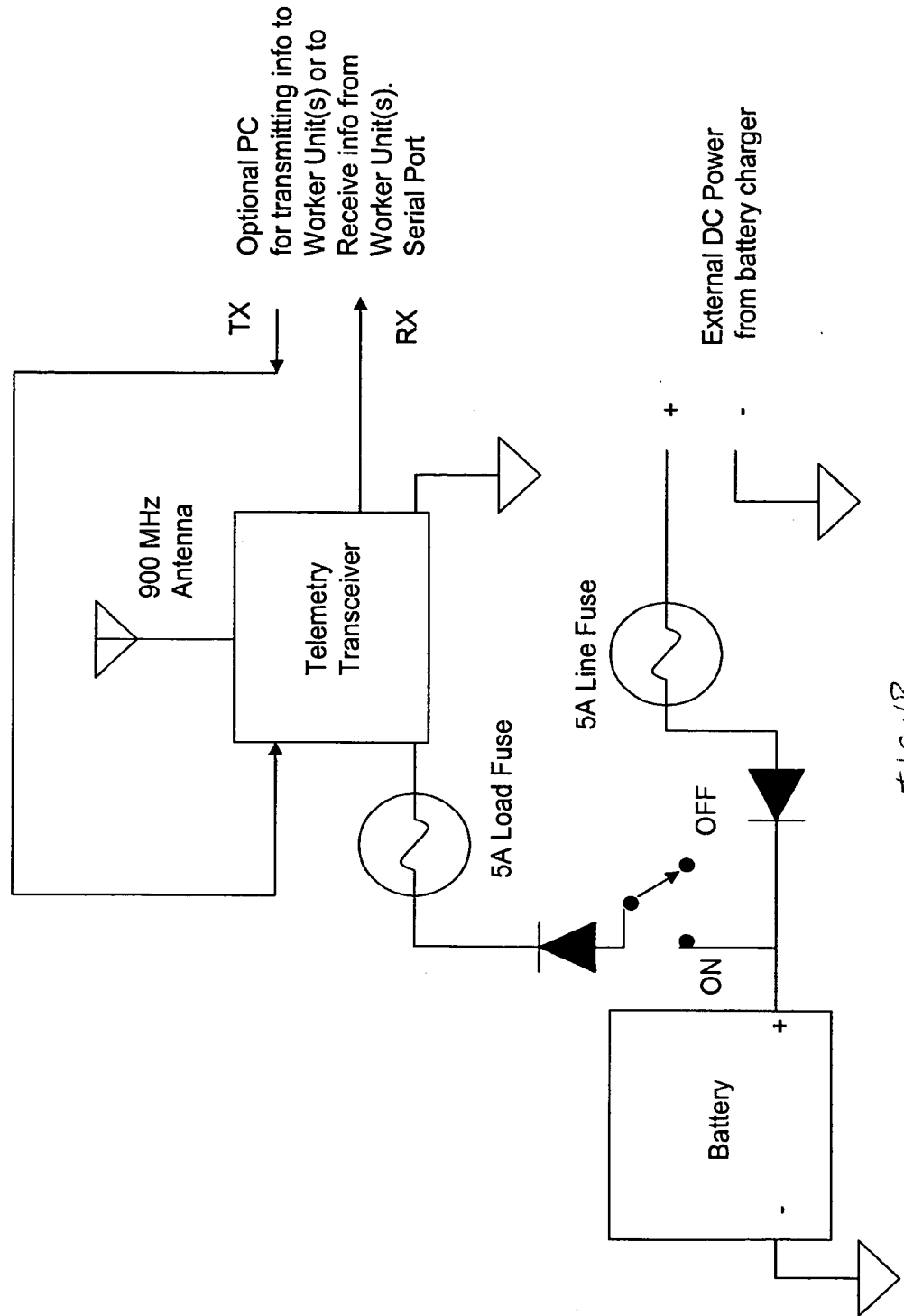


FIG. 4B

4B

LPS Mk3 Program Interface

File Commands Help

Sensor Port Assignment	Data Logging Interval	LPS Data Received
LPS Sensor Port A No Sensor Attached	1	Date / Time
LPS Sensor Port B No Sensor Attached	<input type="radio"/> Hours	Latitude
LPS Sensor Port C No Sensor Attached	<input type="radio"/> Minutes	Longitude
LPS Sensor Port D No Sensor Attached	<input checked="" type="radio"/> Seconds	Altitude
	LPS Unit ID	Pos. Confidence Invalid quality information
	LPS Time Zone	LPS Sensor Port A
		LPS Sensor Port B
		LPS Sensor Port C
		LPS Sensor Port D

FIG. 5A

LPS MK3 Program Interface

File Commands Help

Sensor Port Assignment	Data Logging Interval	LPS Data Received
LPS Sensor Port A: UMd Temperature Sensor	1	Date / Time
LPS Sensor Port B: MIE Personal DataRAM	<input type="radio"/> Hours	Latitude
LPS Sensor Port C: No Sensor Attached	<input type="radio"/> Minutes	Longitude
LPS Sensor Port D: MIE Personal DataRAM	<input type="radio"/> Seconds	Altitude
Ph05 4-Gas Monitor	LPS Unit ID	Pos. Confidence
Quest Tech. 2900 SLM	LPS Time Zone	Invalid quality information
No Sensor Attached		LPS Sensor Port A
		LPS Sensor Port B
		LPS Sensor Port C
		LPS Sensor Port D

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FIG 5B

LPS MK3 Program Interface

File Commands Help

Load Configuration File
Save Configuration File
Reset Interface - new unit
Exit

Sensor Port Assignment	Data Logging Interval	LPS Data Received
LPS Sensor Port A: UMd Temperature Sensor	1	Date / Time
LPS Sensor Port B: MIE Personal DataRAM	<input type="radio"/> Hours	Latitude
LPS Sensor Port C: No Sensor Attached	<input type="radio"/> Minutes	Longitude
LPS Sensor Port D: No Sensor Attached	<input type="radio"/> Seconds	Altitude
	LPS Unit ID	Pos. Confidence
	LPS Time Zone	Invalid quality information
		LPS Sensor Port A
		LPS Sensor Port B
		LPS Sensor Port C
		LPS Sensor Port D

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FIG 5C

LPSMK3 Program Interface

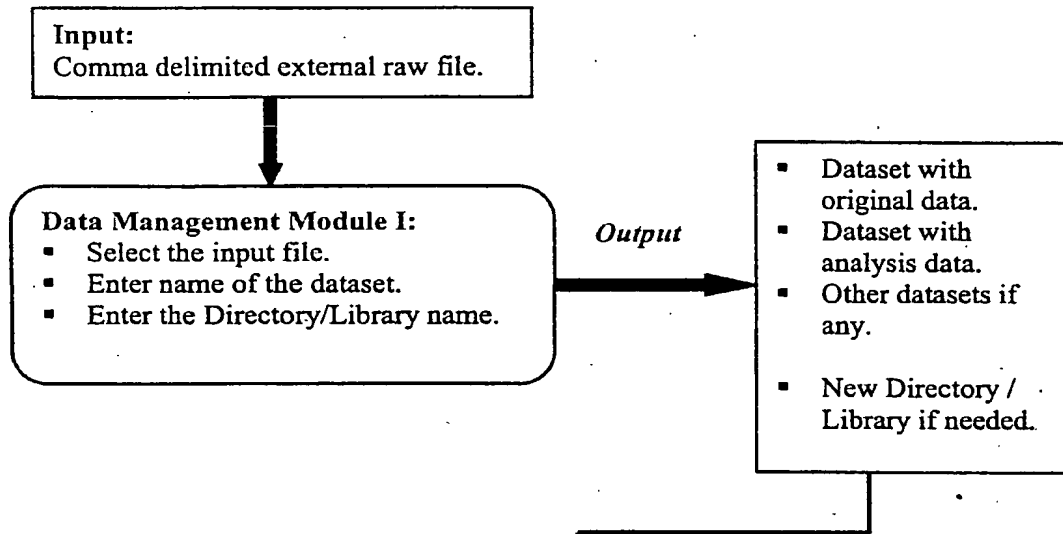
File Commands Help

<input type="checkbox"/> Request Configuration Data <input type="checkbox"/> Send Configuration Data <input type="checkbox"/> Request Time Zone <input type="checkbox"/> Set Time Zone <input type="checkbox"/> Request Unit ID <input type="checkbox"/> Set Unit ID <input type="checkbox"/> Request LPS Data Stream <input type="checkbox"/> Terminate LPS Data Stream <input type="checkbox"/> Request Unit go IDLE mode <input type="checkbox"/> Request Unit go RUN mode	nt	Data Logging Interval: <input type="text" value="1"/> <input type="radio"/> Hours <input type="radio"/> Minutes <input checked="" type="radio"/> Seconds	LPS Data Received Date/Time: <input type="text"/> Latitude: <input type="text"/> Longitude: <input type="text"/> Altitude: <input type="text"/> Pos. Confidence: Invalid quality information LPS Sensor Port A: <input type="text"/> LPS Sensor Port B: <input type="text"/> LPS Sensor Port C: <input type="text"/> LPS Sensor Port D: <input type="text"/>
LPS Sensor Port C: No Sensor Attached		LPS Unit ID: <input type="text"/> LPS Time Zone: <input type="text"/>	
LPS Sensor Port D: No Sensor Attached			

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FIG. 5D

Part I



Part II

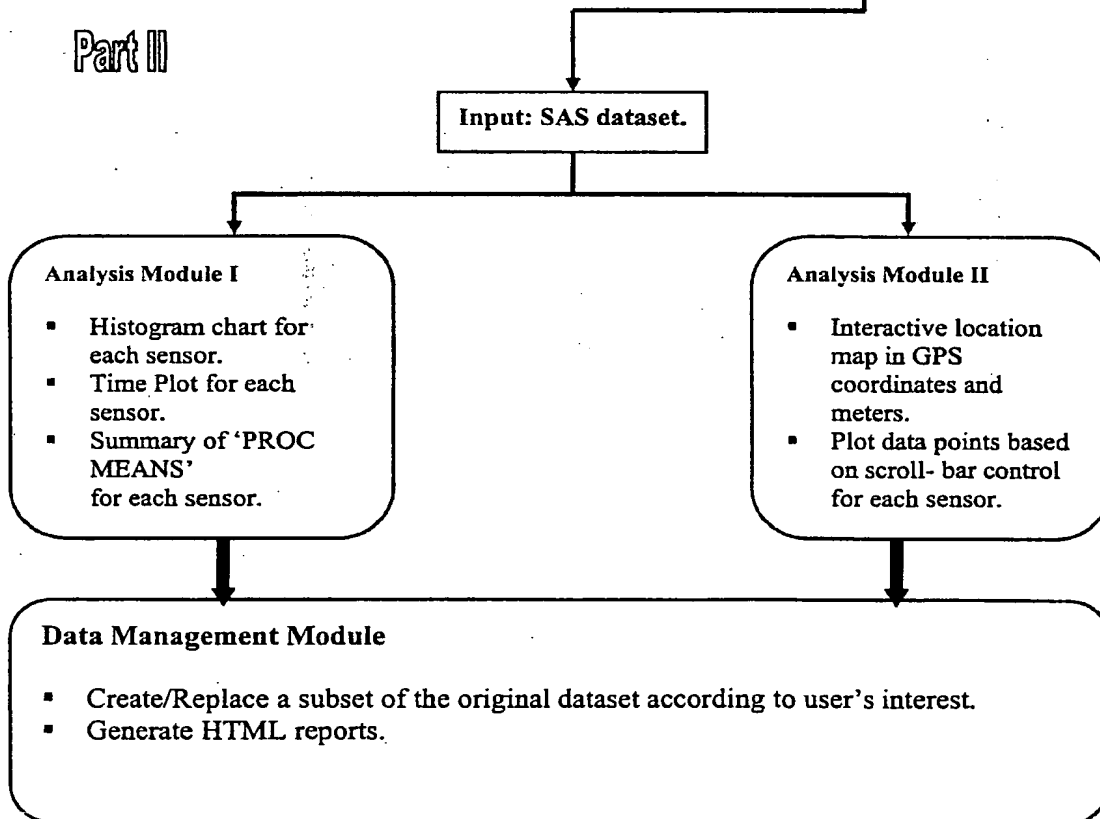


FIG. 6

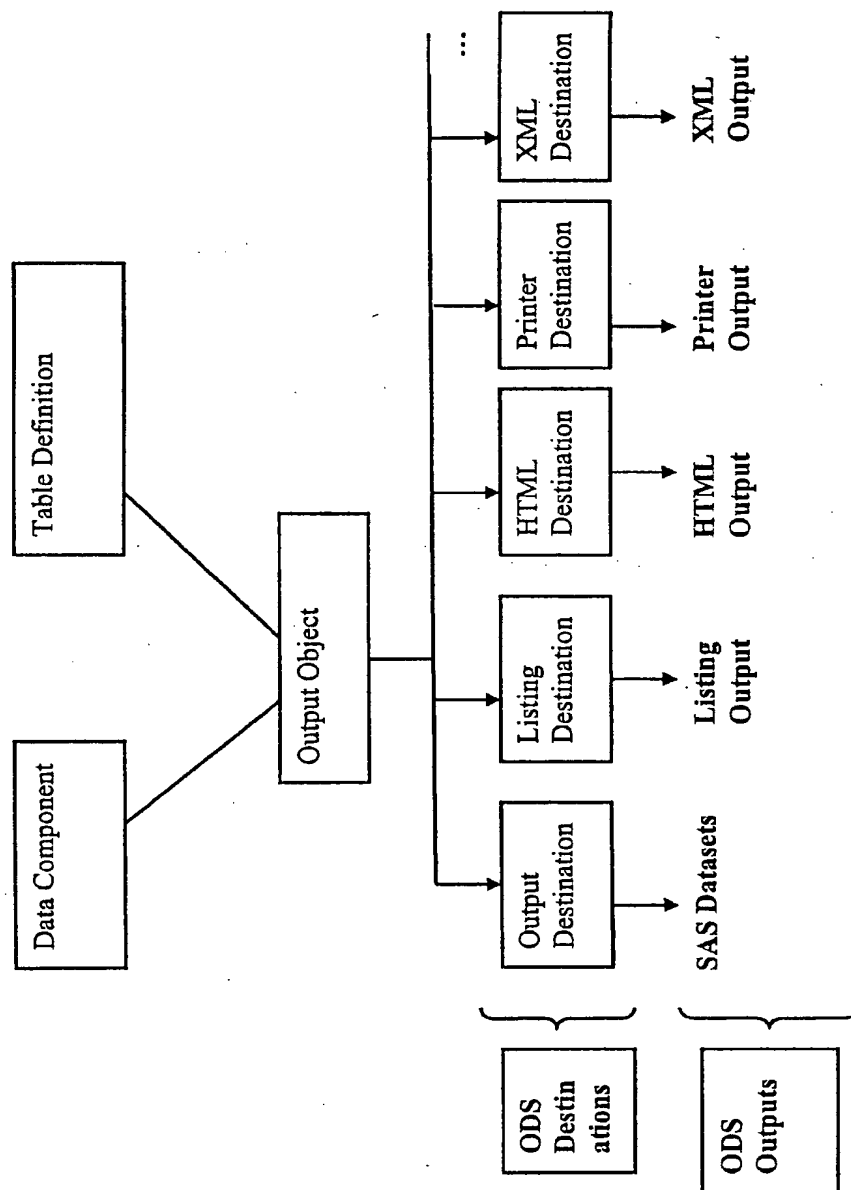


FIG. 7

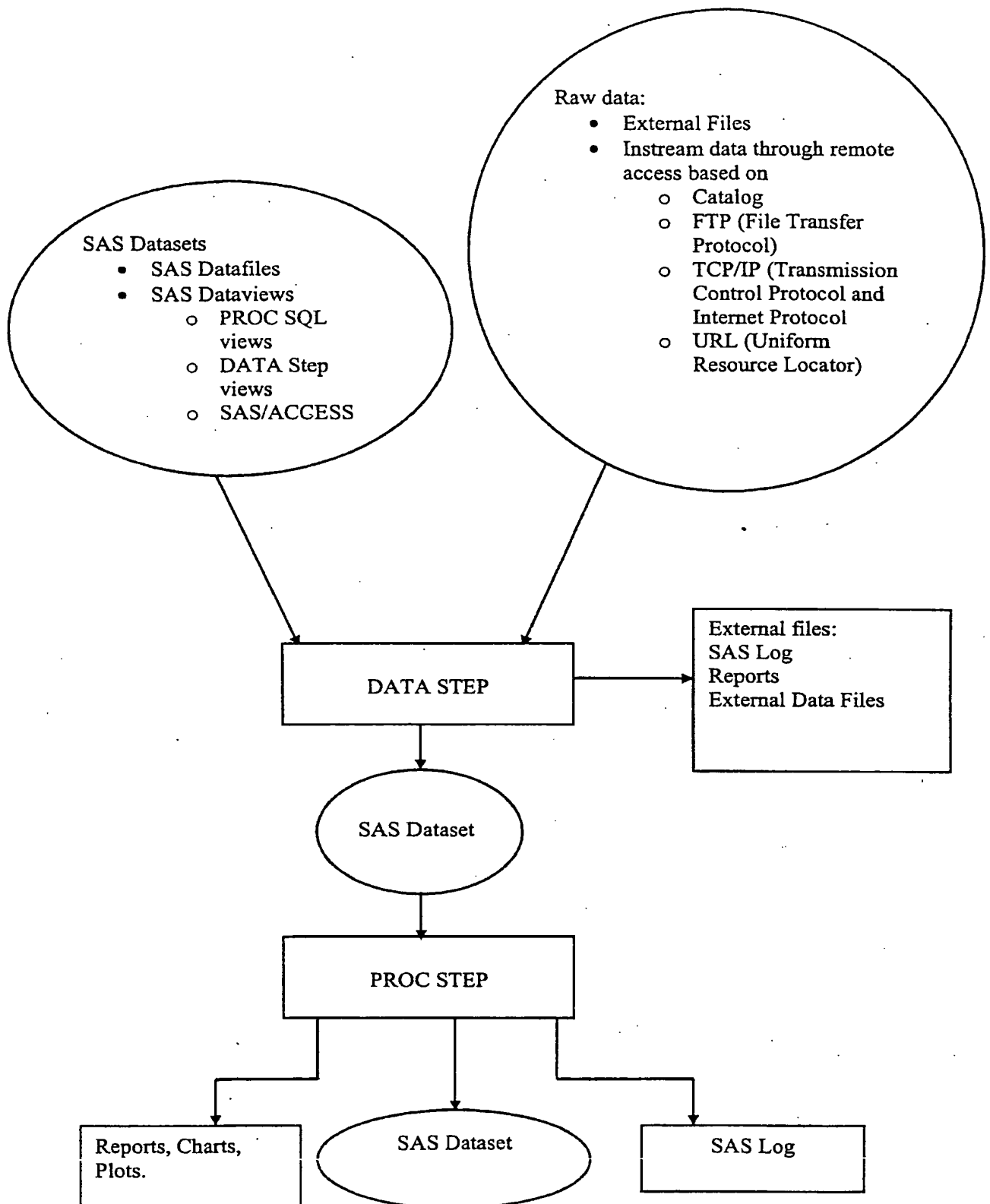


FIG. 8

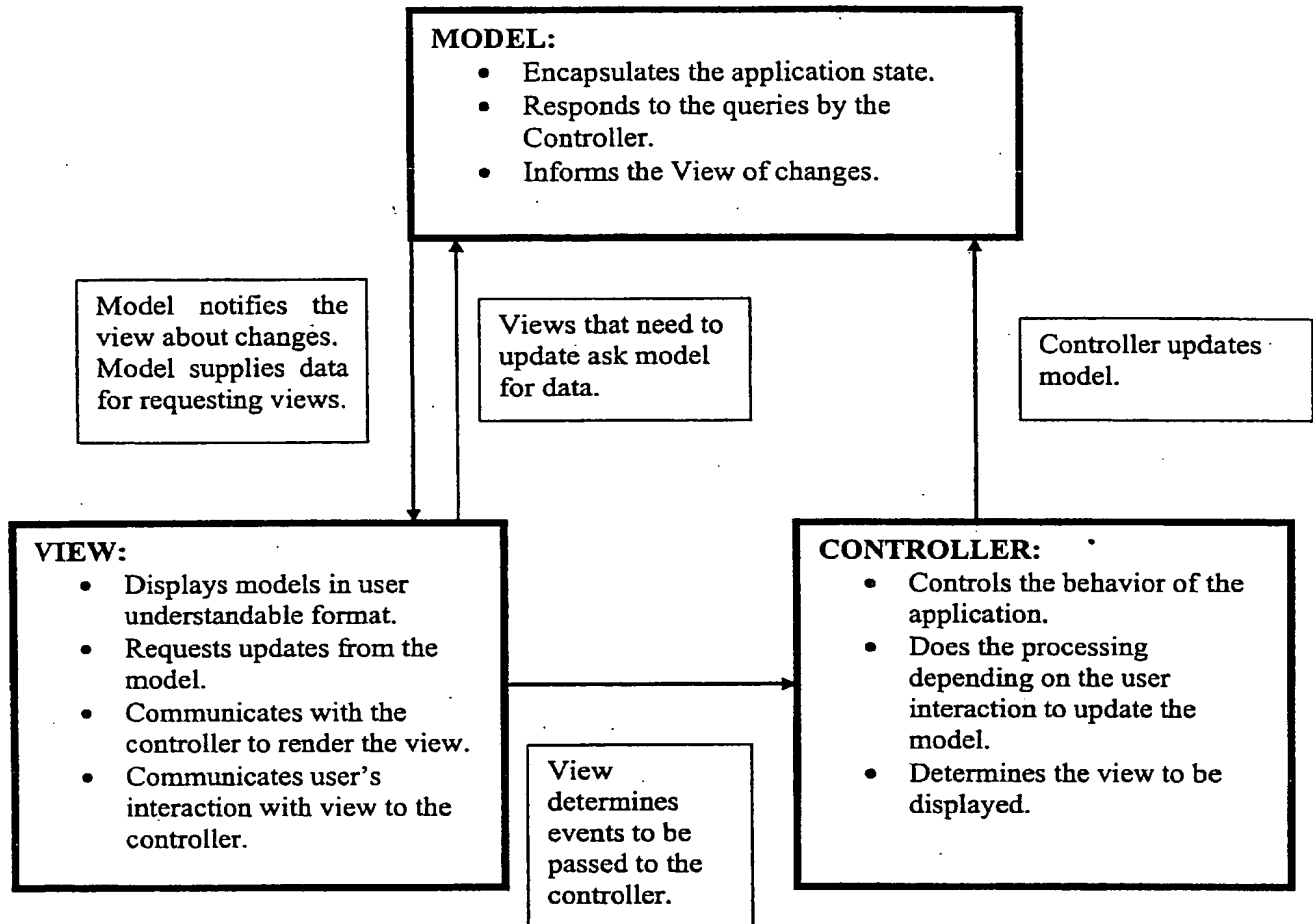


FIG 9

LPS User Analysis Software

Create a new DataSet from Text File

Use existing SAS DataSet

1000 Sensors

Tc La Lm Set

1010 Select a file

A:\Data\020731\001.txt Browse...

1020 Enter Dataset Name

Charlotte

1030 Select Library Name

Mysaslib Browse...

Analyze

1040 Set Reference Point

1050 Longitude

Latitude

Set

Select Library Name

Enter Dataset Name

Analyze

Set Reference Point

Longitude

Latitude

Set

FIG. 10

Obs	STAT	DUST	LAVG	LMAX
1	N	2032.00	2032.00	2032.00
2	MIN	718.00	51.60	51.60
3	MAX	952.00	91.20	93.40
4	MEAN	763.48	64.55	66.07
5	STD	16.75	8.17	8.61
6	N (>0)	2032.00		
7	GMN	763.31		
8	GSD	1.02		

FIG-11A

Variable: DUST

Quantiles (Definition 5)	
Quantile	Estimate
100% Max	952
99%	826
95%	790
90%	780
75% Q3	768
50% Median	759
25% Q1	754
10%	751
5%	749
1%	741
0% Min	718

FIG-11C

Variable: LAVG

Quantiles (Definition 5)	
Quantile	Estimate
100% Max	91.2
99%	82.0
95%	78.0
90%	75.7
75% Q3	70.9
50% Median	64.5
25% Q1	57.5
10%	53.6
5%	52.3
1%	51.6
0% Min	51.6

FIG-11D

Variable: LMAX

Quantiles (Definition 5)	
Quantile	Estimate
100% Max	93.40
99%	83.90
95%	79.70
90%	77.60
75% Q3	73.00
50% Median	66.10
25% Q1	58.85
10%	54.30
5%	52.90
1%	51.60
0% Min	51.60

FIG-11E

Obs	position, conf	STAT	datetime	lat, meters	lon, meters	alt, meters	DUST	LAVG	MAX
1		N	01JAN60:00:33:52.0	2032.00	2032.00	2032	2032	2032.0	2032.0
2		MIN	23MAY02:10:24:22.0	-635.54	-26.38	325	718	51.6	51.6
3		MAX	23MAY02:10:58:41.0	53.52	142.32	511	952	91.2	93.4
4		MEAN	23MAY02:10:41:29.9	-380.63	69.36	356	763	64.5	66.1
5		STD	01JAN60:00:09:55.7	208.23	52.73	29	17	8.2	8.6
6	2DD	N	01JAN60:00:04:16.0	256.00	256.00	256	256	256.0	256.0
7	2DD	MIN	23MAY02:10:24:32.0	-635.48	-2.58	330	747	51.6	51.6
8	2DD	MAX	23MAY02:10:58:05.0	52.29	142.32	389	812	81.2	83.2
9	2DD	MEAN	23MAY02:10:44:14.5	-469.84	79.39	362	762	65.3	66.7
10	2DD	STD	01JAN60:00:06:37.8	145.32	49.49	15	10	8.0	8.4
11	2DU	N	01JAN60:00:00:17.0	17.00	17.00	17	17	17.0	17.0
12	2DU	MIN	23MAY02:10:33:37.0	-551.90	-11.77	344	746	51.7	52.0
13	2DU	MAX	23MAY02:10:51:13.0	-401.20	115.67	411	871	71.5	73.3
14	2DU	MEAN	23MAY02:10:46:32.1	-476.12	44.39	360	770	57.3	58.2
15	2DU	STD	01JAN60:00:05:35.7	68.27	53.07	16	31	6.1	6.6
16	3DD	N	01JAN60:00:23:03.0	1383.00	1383.00	1383	1383	1383.0	1383.0
17	3DD	MIN	23MAY02:10:24:22.0	-635.54	-8.23	325	718	51.6	51.6
18	3DD	MAX	23MAY02:10:58:41.0	53.52	142.19	405	952	91.2	93.4
19	3DD	MEAN	23MAY02:10:39:19.2	-321.99	78.58	348	764	65.1	66.6
20	3DD	STD	01JAN60:00:10:45.6	216.45	51.17	16	18	8.2	8.6
21	3DU	N	01JAN60:00:06:03.0	363.00	363.00	363	363	363.0	363.0
22	3DU	MIN	23MAY02:10:29:47.0	-627.36	-26.38	332	734	51.6	51.6
23	3DU	MAX	23MAY02:10:51:26.0	-272.03	116.57	511	829	79.0	80.3
24	3DU	MEAN	23MAY02:10:47:55.2	-533.97	26.78	386	761	62.4	63.9
25	3DU	STD	01JAN60:00:03:12.8	79.69	37.98	49	12	7.9	8.5
26	CDR	N	01JAN60:00:00:13.0	13.00	13.00	13	13	13.0	13.0
27	CDR	MIN	23MAY02:10:33:17.0	-459.51	111.39	344	755	61.3	62.4
28	CDR	MAX	23MAY02:10:33:36.0	-449.85	112.66	344	786	68.4	70.1
29	CDR	MEAN	23MAY02:10:33:27.3	-455.80	112.18	344	769	64.5	66.1
30	CDR	STD	01JAN60:00:00:07.1	4.89	0.64	0	11	1.6	1.9

FIG. 11B

FIG. 11F

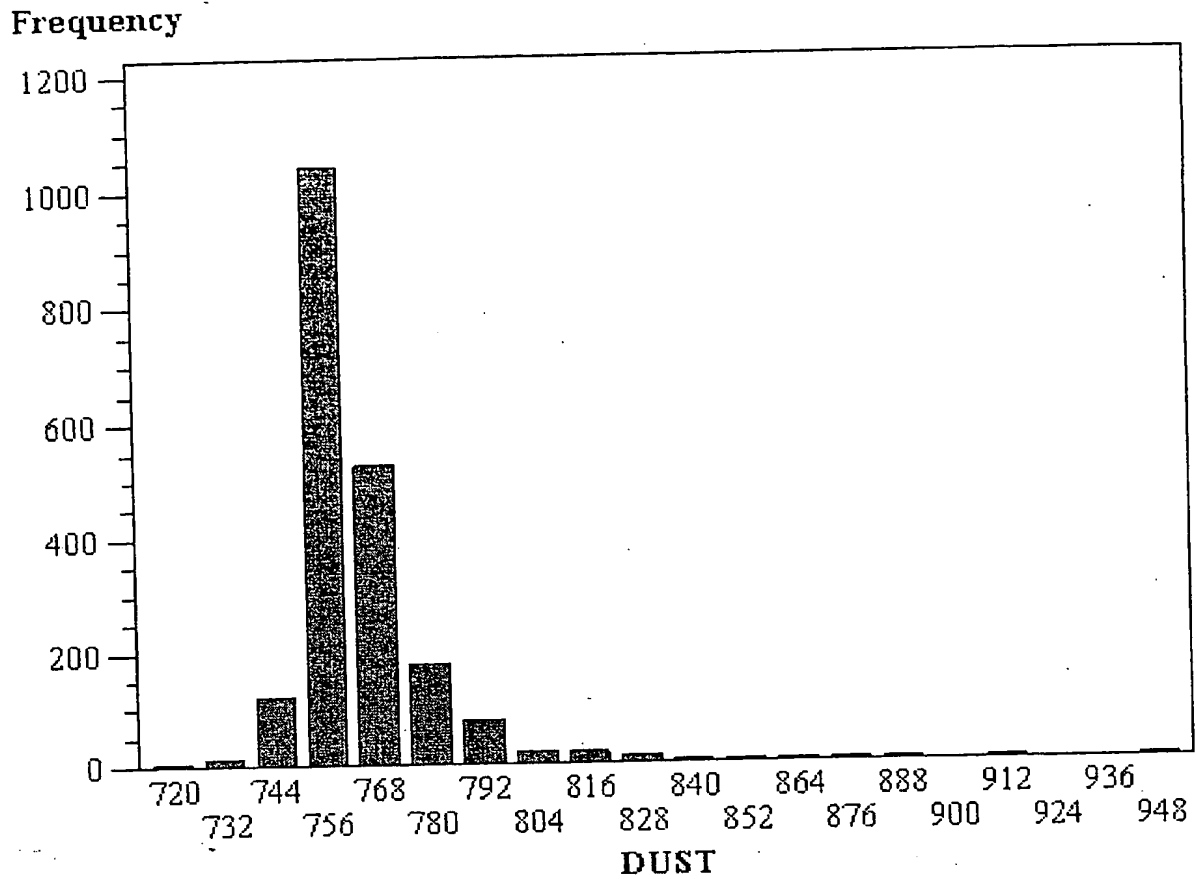


FIG. 11G

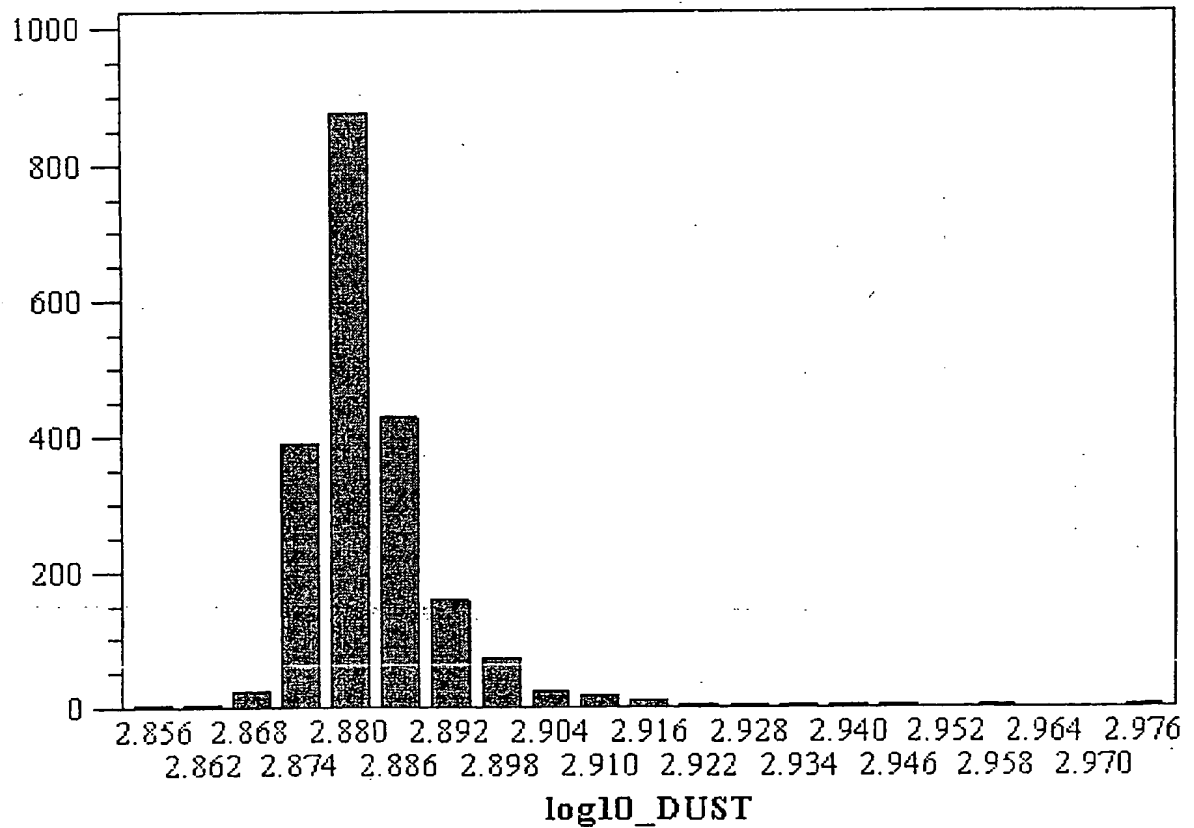


FIG. 11H

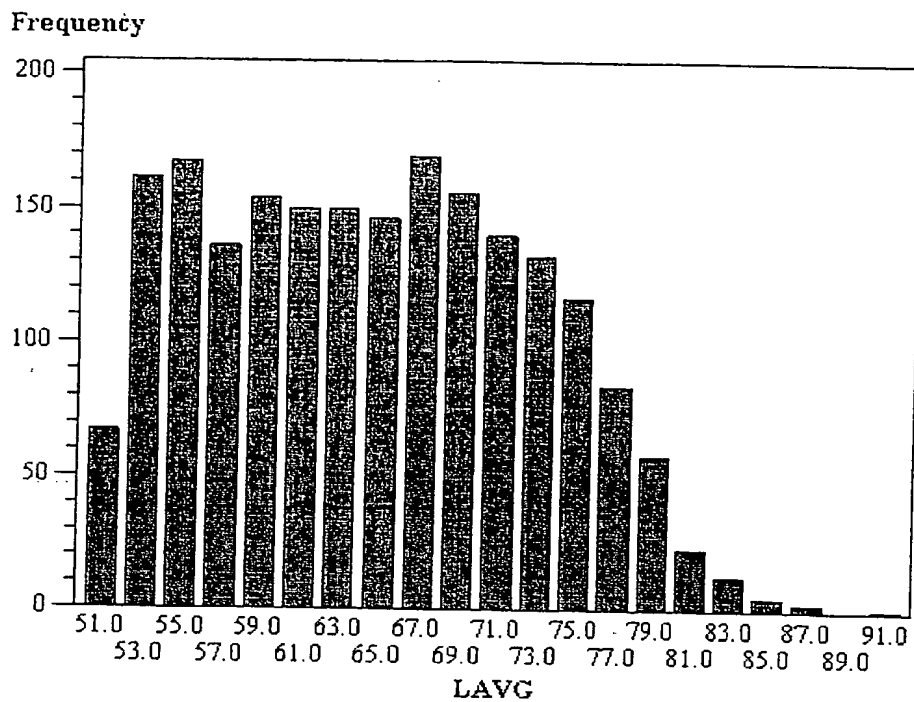
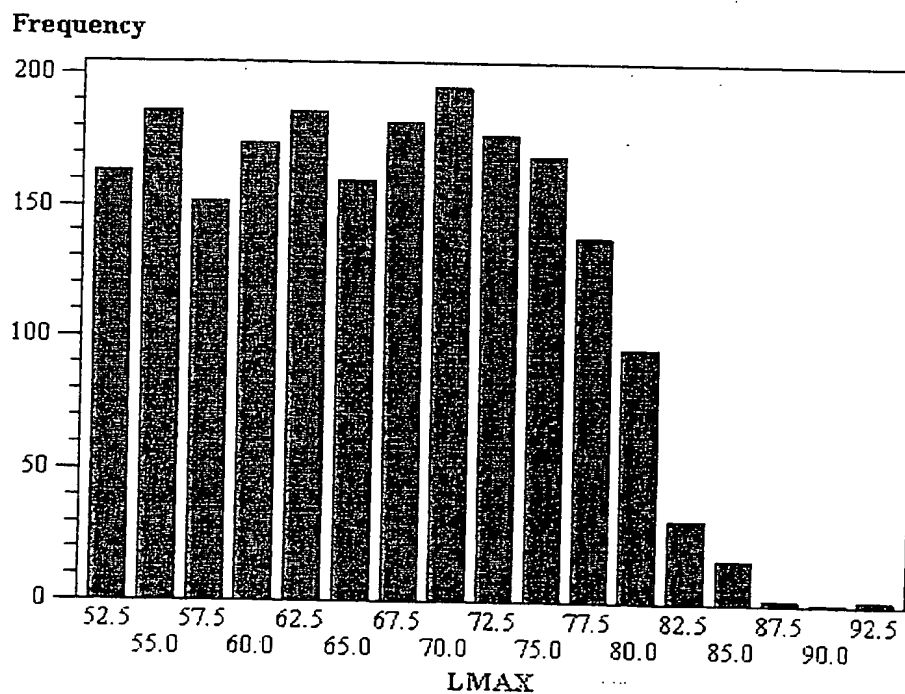


FIG. 11I



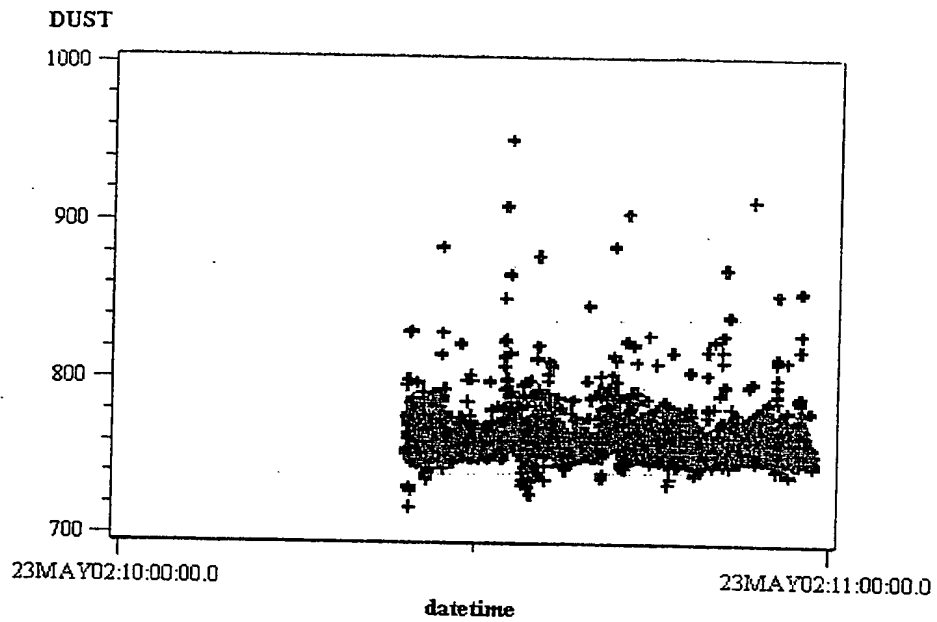


FIG. 11J

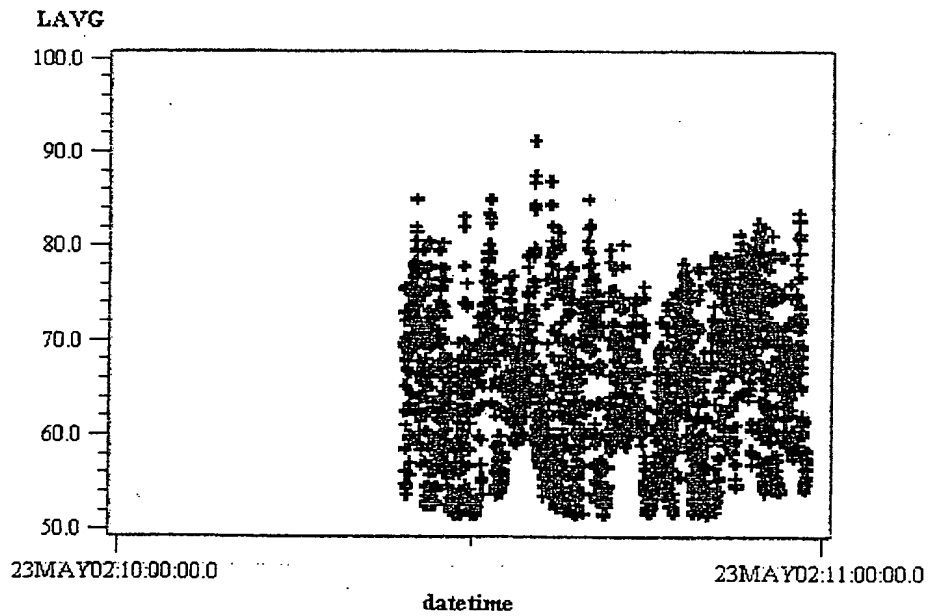


FIG. 11K

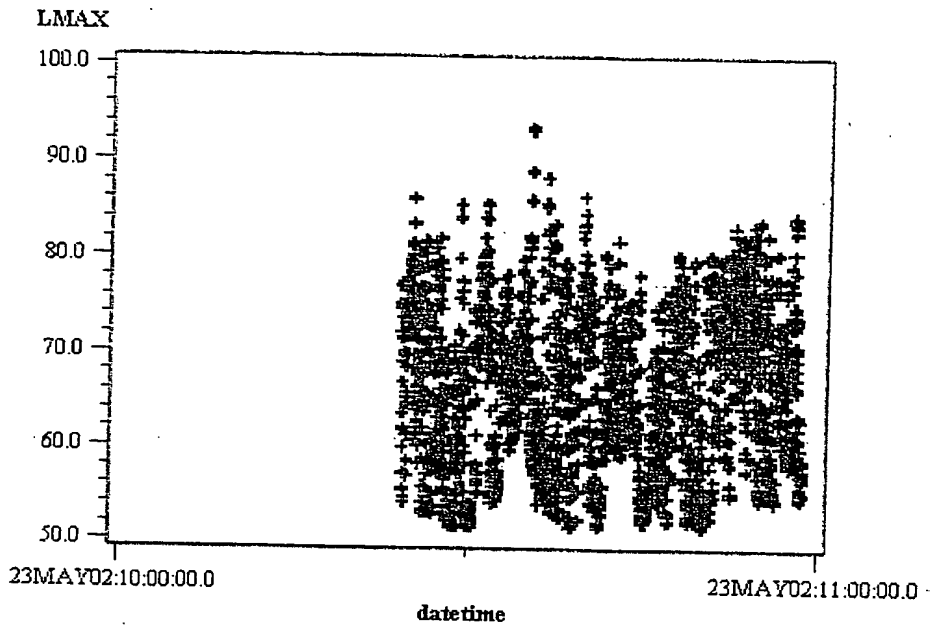


FIG. 11L

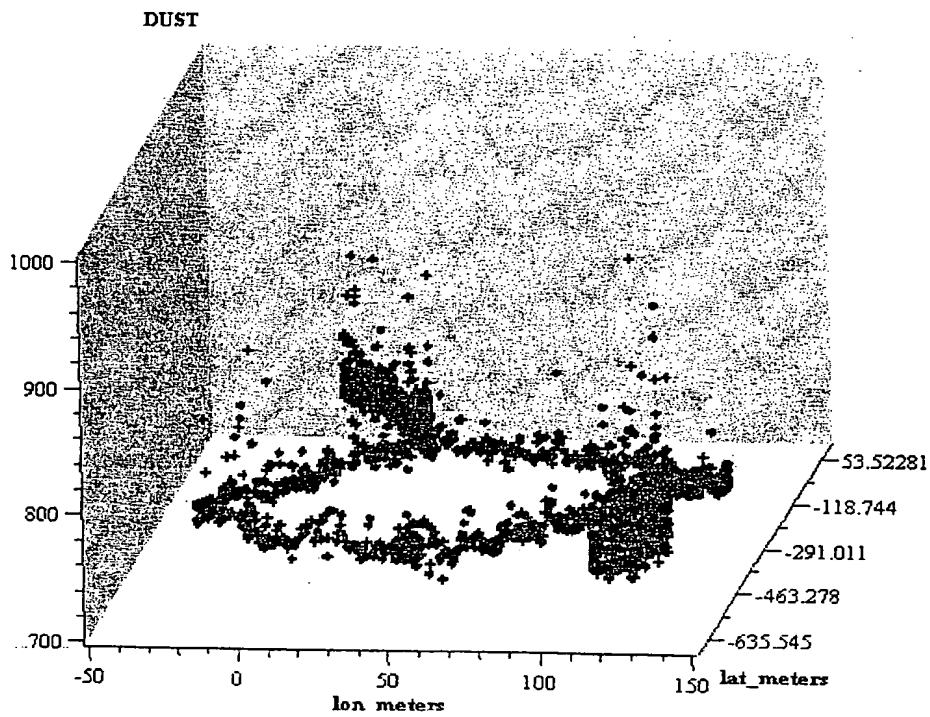


FIG. 11M

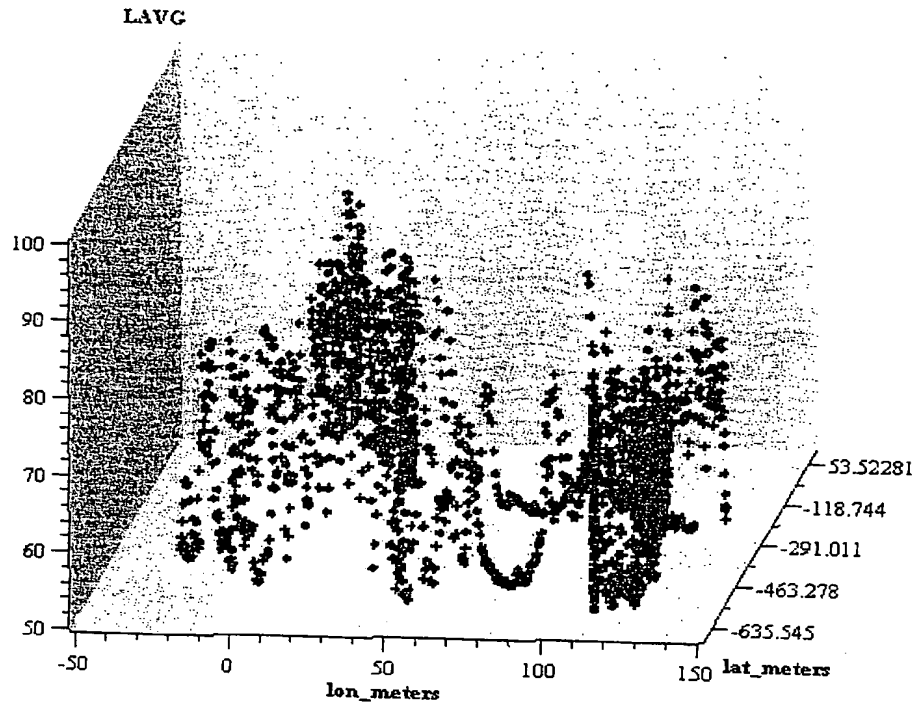


FIG. 11N

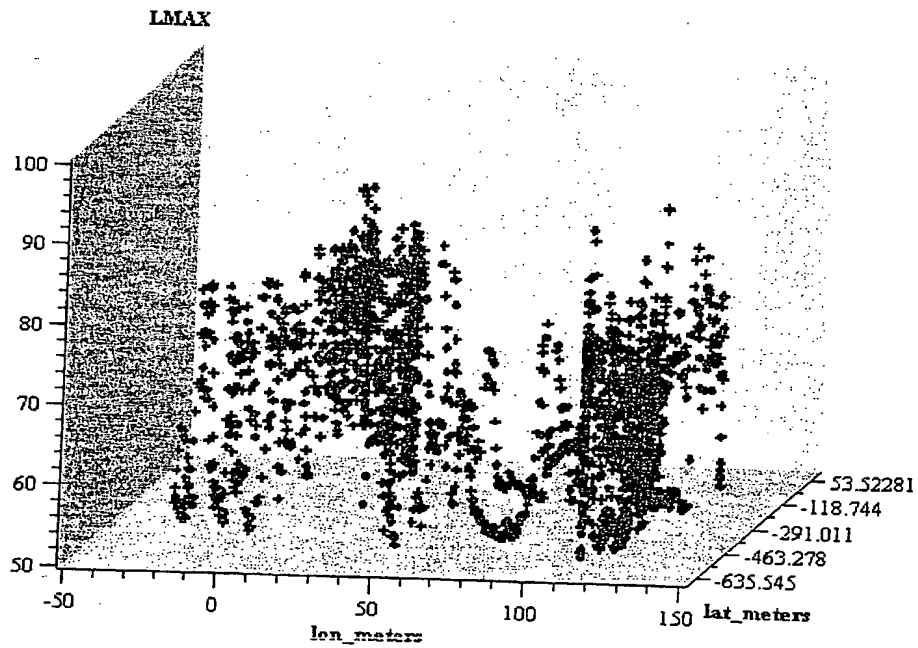


FIG. 11D

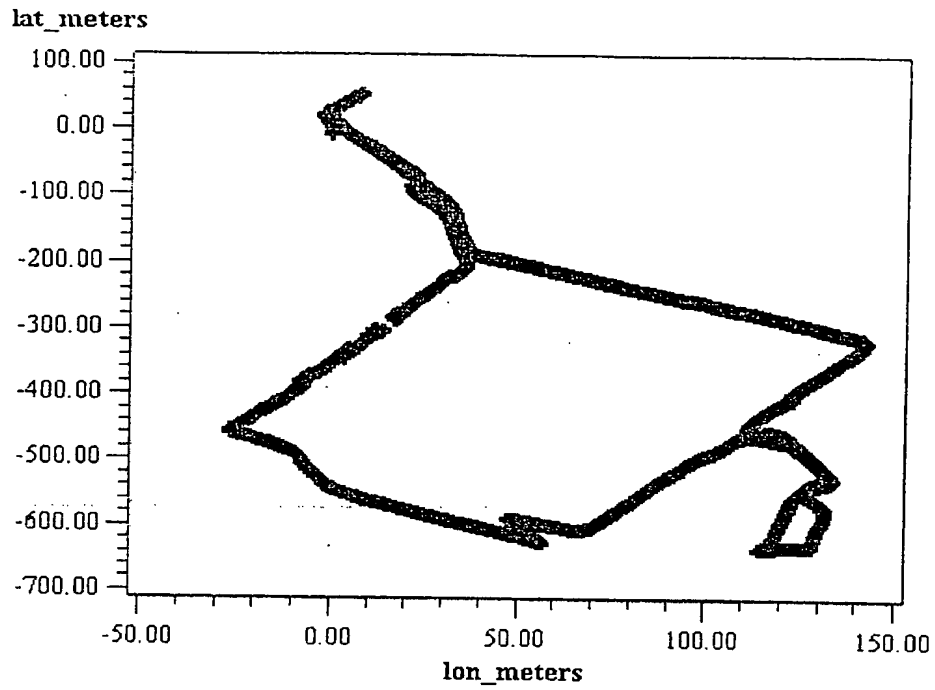


FIG. 11P

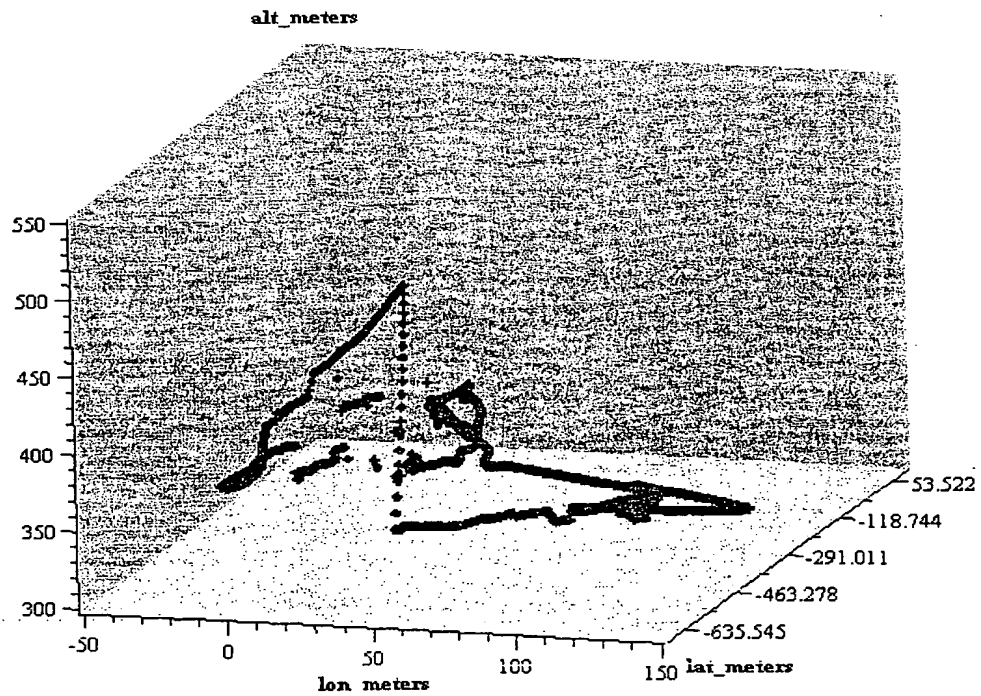


FIG. 11Q

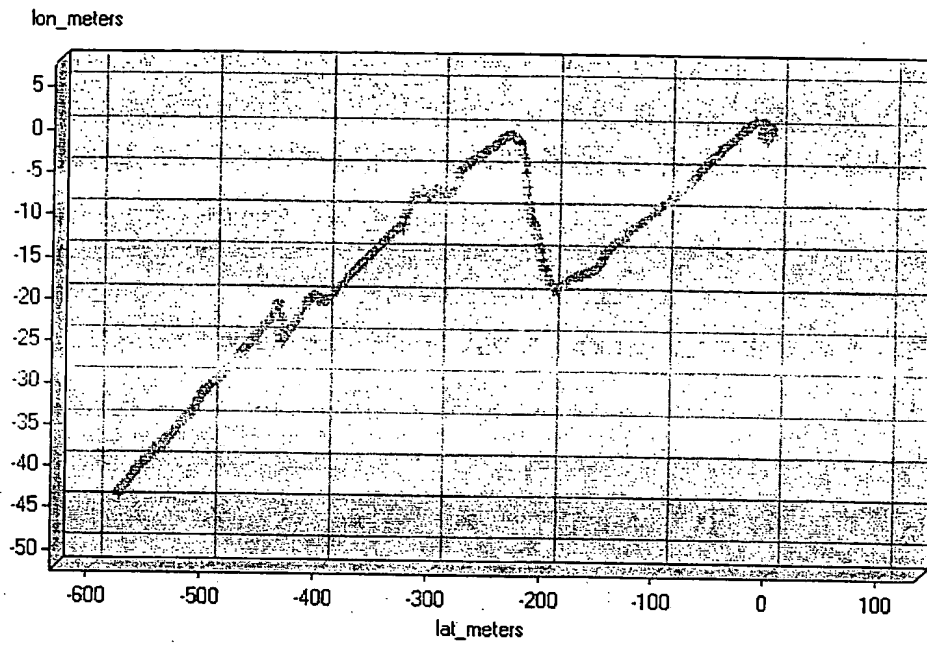


FIG. 11R

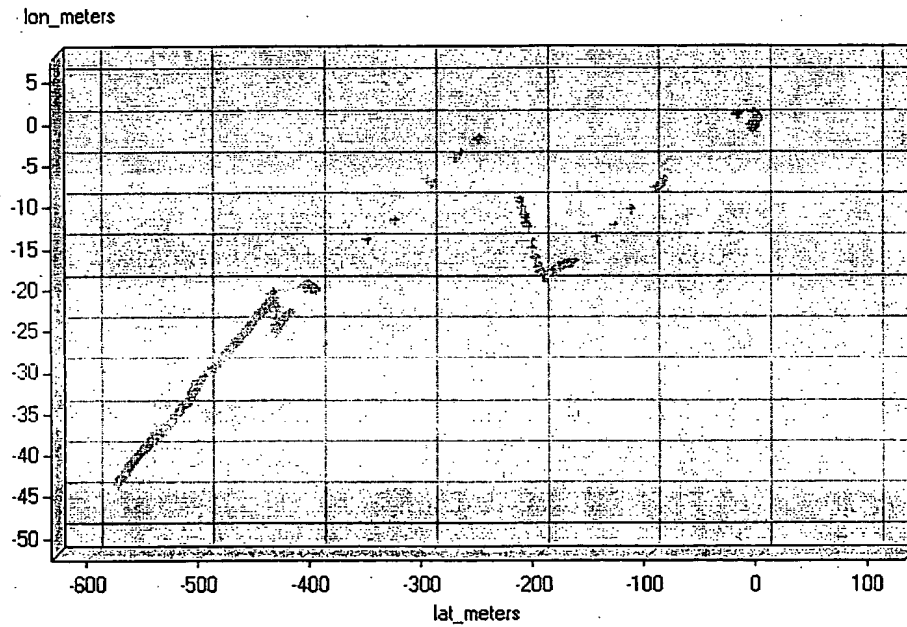


FIG. 11S

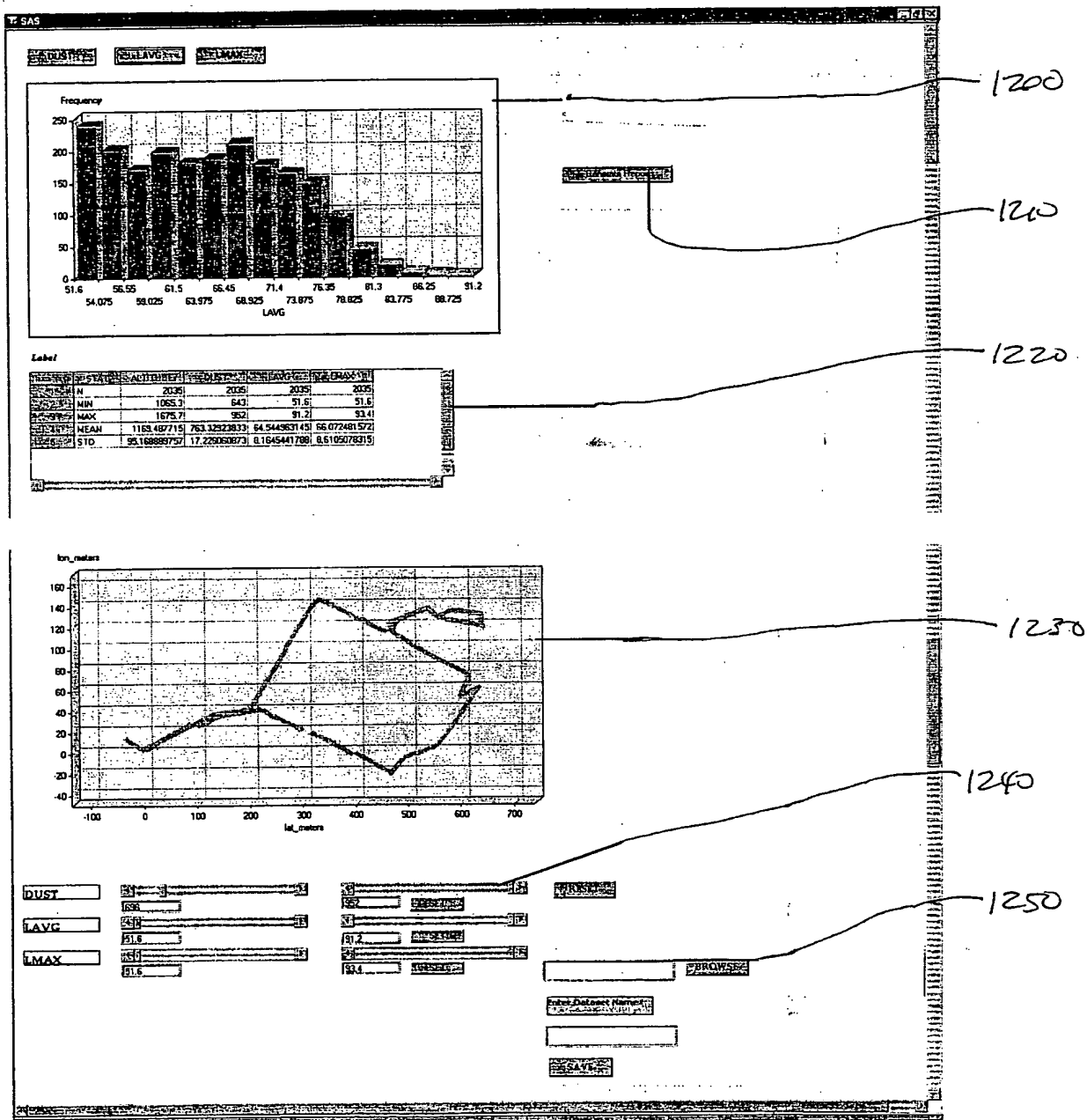


FIG 12

FIG. 13

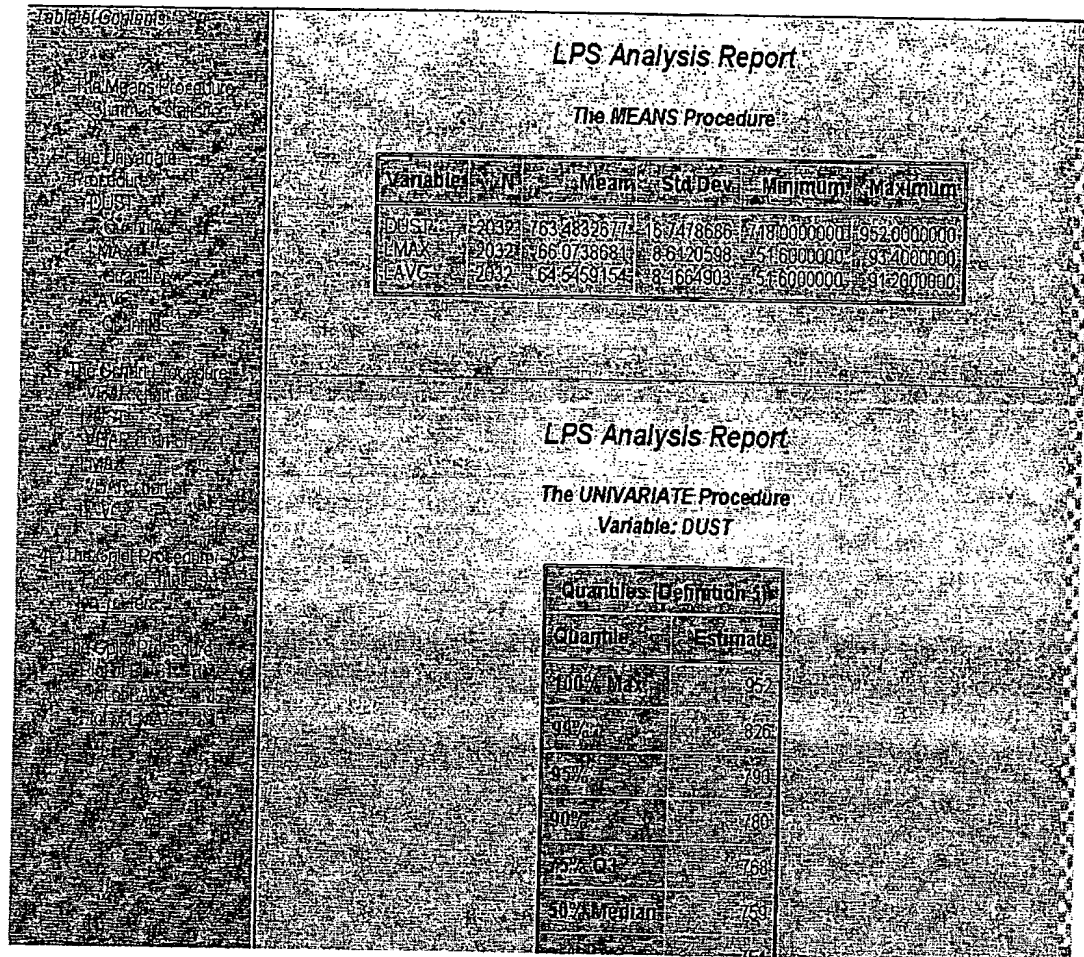
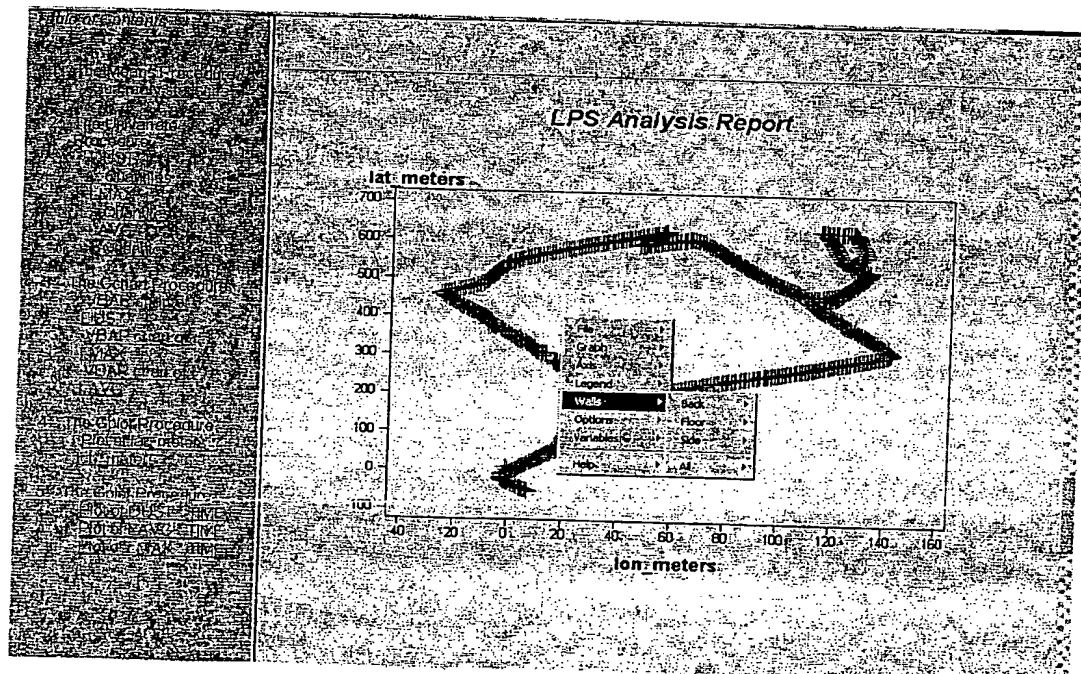


FIG. 14



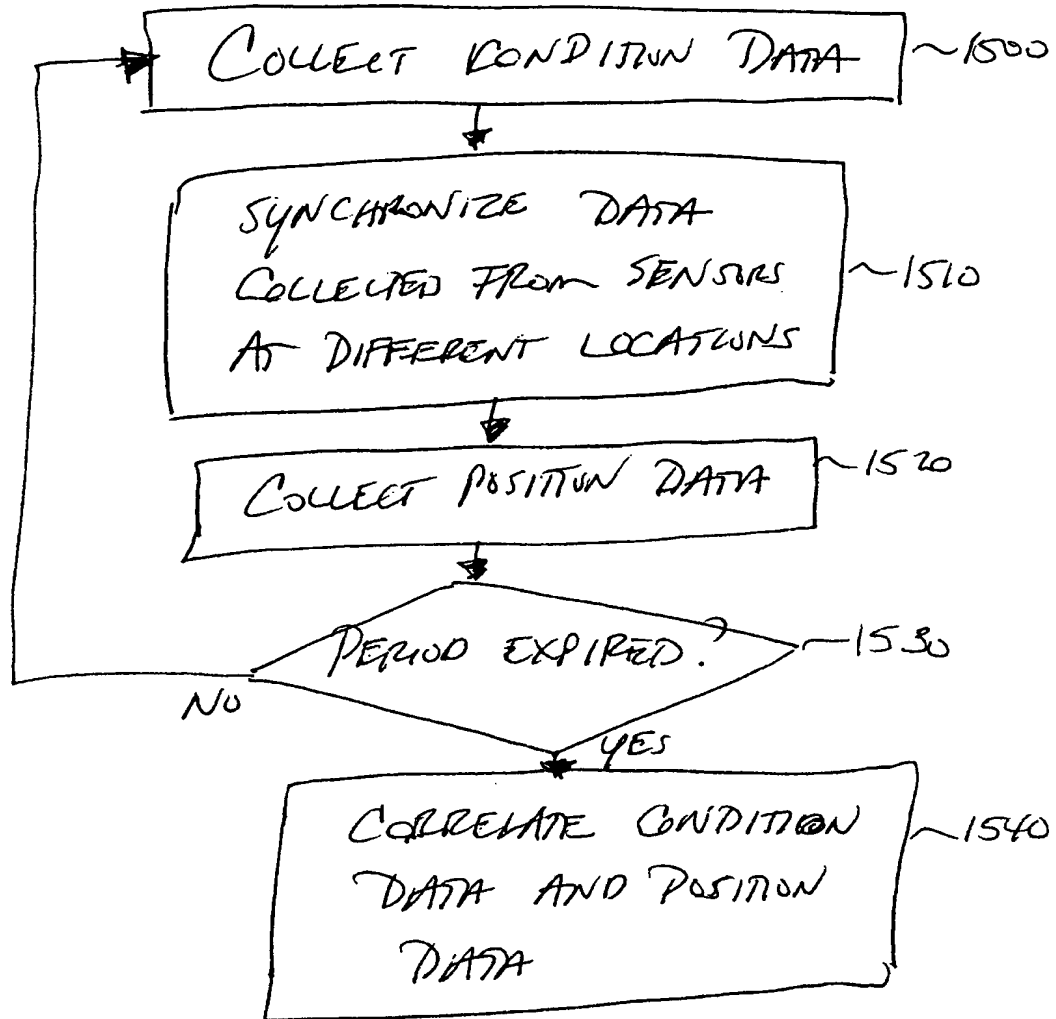


FIG 15

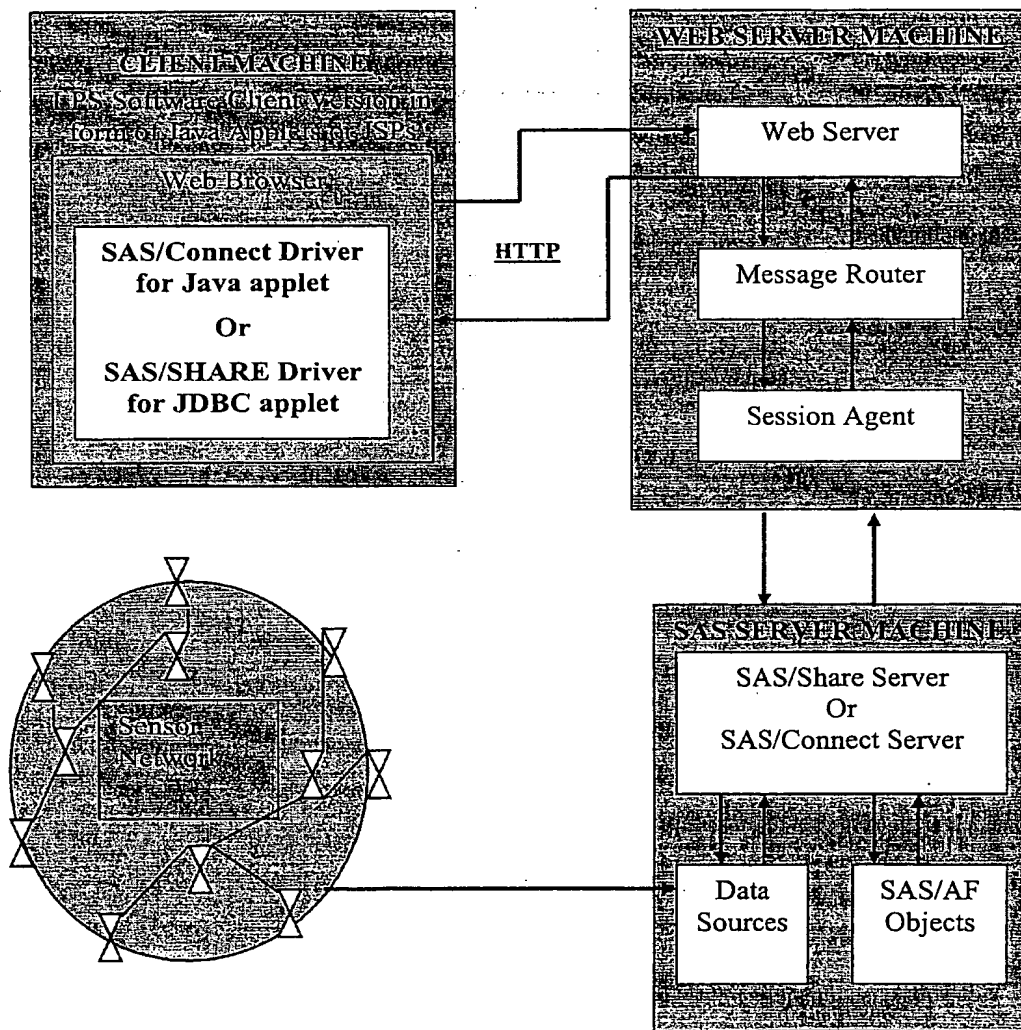


FIG. 16